



VCE PSYCHOLOGY 2012

YEAR 12 TRIAL EXAM UNIT 3

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Time allowed: 90 minutes

Total marks: 90

Section A – Multiple Choice Questions 45 marks

Section B – Short Answer Questions 35 marks

Section C – Extended Response Question 10 marks

An Answer Sheet is provided for Section A.

Answer all questions in Section B & C in the space provided.

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Student Name.....

VCE Psychology 2012 Year 12 Trial Exam Unit 3

Student Answer Sheet

There are 45 Multiple Choice questions to be answered by circling the correct letter in the table below. Use only a 2B pencil. If you make a mistake, erase and enter the correct answer. Marks will not be deducted for incorrect answers.

Question 1	A	B	C	D	Question 2	A	B	C	D
Question 3	A	B	C	D	Question 4	A	B	C	D
Question 5	A	B	C	D	Question 6	A	B	C	D
Question 7	A	B	C	D	Question 8	A	B	C	D
Question 9	A	B	C	D	Question 10	A	B	C	D
Question 11	A	B	C	D	Question 12	A	B	C	D
Question 13	A	B	C	D	Question 14	A	B	C	D
Question 15	A	B	C	D	Question 16	A	B	C	D
Question 17	A	B	C	D	Question 18	A	B	C	D
Question 19	A	B	C	D	Question 20	A	B	C	D
Question 21	A	B	C	D	Question 22	A	B	C	D
Question 23	A	B	C	D	Question 24	A	B	C	D
Question 25	A	B	C	D	Question 26	A	B	C	D
Question 27	A	B	C	D	Question 28	A	B	C	D
Question 29	A	B	C	D	Question 30	A	B	C	D
Question 31	A	B	C	D	Question 32	A	B	C	D
Question 33	A	B	C	D	Question 34	A	B	C	D
Question 35	A	B	C	D	Question 36	A	B	C	D
Question 37	A	B	C	D	Question 38	A	B	C	D
Question 39	A	B	C	D	Question 40	A	B	C	D
Question 41	A	B	C	D	Question 42	A	B	C	D
Question 43	A	B	C	D	Question 44	A	B	C	D
Question 45	A	B	C	D					

VCE Psychology 2012 Year 12 Trial Exam Unit 3

SECTION A – Multiple Choice Questions

Question 1

Consciousness can be described as

- A. the awareness of objects and events in the external world and of our own existence and mental experiences at any given moment.
- B. our mental experiences and internal thoughts at any given moment.
- C. shifting our awareness from our external surroundings to our internal thoughts and feelings.
- D. the awareness that our mind and body are two different things.

Question 2

According to Rene Descartes

- A. the mind and body are the same thing. They are both fleshy structures.
- B. the mind and body are two different things. The mind is a non-physical spiritual entity, whereas the body is a fleshy structure.
- C. the mind and body are two different things. The mind is a fleshy structure, whereas the body is a non-physical entity.
- D. consciousness is like a continuous stream of ever changing thoughts and emotions.

Question 3

Rene Descartes also believed that the mind and body come into contact through the _____ gland as this gland is located _____.

- A. Pineal; in the left hemisphere only of the brain
- B. Hypothalamus; in the left hemisphere only of the brain
- C. Hypothalamus; near the centre of the brain
- D. Pineal; near the centre of the brain

Question 4

According to the "consciousness continuum", which of the following is correct?

- A. A person who is daydreaming is more aware of their surroundings than a person who is in a meditative state.
- B. A person who is hypnotised is more aware of their surroundings than a person who is in a meditative state.
- C. A person who is daydreaming is more aware of their surroundings than a person who is demonstrating focussed attention.
- D. A person who is asleep is more aware of their surroundings than a person who is hypnotised.

Question 5

Marc is learning to drive a manual car for the first time. He concentrates intently on changing gears, checking his mirrors and ensuring that he doesn't travel over the speed limit. At times, Marc is so focussed on driving that he doesn't pay attention to the advice his driving instructor is providing.

For Marc, driving is an example of

- A. an Automatic Process.
- B. Divided Attention.
- C. Selective Attention.
- D. a Controlled Process.

Question 6

Marc's mother, Mary, has been driving for many years. Mary feels comfortable driving and finds that she can listen to the radio and sing along to her favourite songs while at the same time having the ability to pay attention to road signs, other traffic, and her speed. Mary is demonstrating

- A. an Automatic Process.
- B. Divided Attention.
- C. Selective Attention.
- D. a Controlled Process.

Question 7

Which of the following scenarios is **not** an example of a person experiencing an altered state of consciousness?

- A. During an examination, Peter stares out of the window and fantasises about kicking the winning goal in this weekend's grand final.
- B. Sarah is relaxing on the couch watching her favourite program on television.
- C. Michael is asleep after a long day at work.
- D. Sue is under anaesthetic during an operation.

Question 8

Daydreaming is considered to be _____. Daydreams are more likely to be experienced when a person is _____ or _____.

- A. Normal waking consciousness, stationary, bored
- B. Normal waking consciousness, active, bored
- C. an Altered state of consciousness, stationary, bored
- D. an Altered state of consciousness, active, lonely

Question 9

Susan has just received a promotion at work. To celebrate, Susan decides to go to the local pub after work with a few of her friends. While at the pub, Susan drinks quite a number of alcoholic drinks. When she wakes the next morning, Susan struggles to remember specific events that occurred while drinking at the pub. Susan has experienced an altered state of consciousness because Susan most likely would have experienced

- A. a better memory than usual, slower reaction times, improvement in performance of complex tasks.
- B. less self-control, slower reaction times, impaired perception of time.
- C. faster reaction times, difficulties with voluntary muscular control, deterioration of performance of complex tasks.
- D. impaired memory, increased self-awareness, impaired perception of time.

Question 10

Why is consciousness regarded as a "psychological construct"?

- A. Because it is believed to exist, however cannot be directly measured.
- B. Because it doesn't really exist; consciousness is merely an idea that was created by William James.
- C. Because consciousness exists and this has been proved through the use of an electroencephalograph.
- D. Because a person "constructs" their own consciousness based on their awareness of their internal thoughts and feelings.

Question 11

A person's consciousness can be measured, using a number of devices. One of these devices is the galvanic skin response. This device measures consciousness by

- A. measuring the amount of sweat that is produced by the sweat glands on the palm of the hand.
- B. detecting, amplifying and recording the electrical activity of the skin.
- C. measuring the electrical conductivity of the skin's surface.
- D. placing electrodes on the surface of the skin.

Question 12

Pauline is sitting on the couch watching television. She is bored by the program and although she is awake, she feels very relaxed. Suddenly her smoke alarm sounds and she jumps off the couch, running in to the kitchen where the toast that she was cooking has burnt.

Which of the following best describes Pauline's brainwave patterns as she changes from a relaxed state into her state of panic?

- A. Theta – Delta
- B. Beta – Alpha
- C. Theta – Beta
- D. Alpha – Beta

Questions 13-16 refer to the following information.

James is having difficulty sleeping. On his doctor's advice, James visits a sleep clinic in which he is attached to a number of recording devices. The devices record information regarding James' sleep patterns from the time he goes to sleep at 11:00 p.m. until the time he wakes at 7:00 p.m.

Question 13

Assuming that James remains asleep for the duration of the night, what is expected to happen to his REM stages as the night progresses?

- A. They will occur less often
- B. They will occur more often, however will be shorter in length
- C. They will occur more often and will be longer in length
- D. They will become "shallower" as the night progresses.

Question 14

Which of the following devices would be the least accurate in determining whether or not James was experiencing REM sleep?

- A. Core body temperature
- B. Electromyograph
- C. Electrooculargraph
- D. Electroencephalograph

Question 15

Whilst James is asleep, the electroencephalograph detects sleep spindles and K complexes. At this point in time, James would be experiencing the following sleep stage

- A. NREM stage 1
- B. NREM stage 2
- C. NREM stage 3
- D. REM

Question 16

Sleep spindles are characterised by _____, while K complexes show _____.

- A. brief bursts of lower frequency brain wave activity; high frequency and slightly higher amplitude waves
- B. brief bursts of higher frequency brain wave activity; low frequency and slightly higher amplitude waves
- C. low frequency and slightly higher amplitude waves; brief bursts of higher frequency brain wave activity
- D. high frequency and slightly higher amplitude waves; brief bursts of lower frequency brain wave activity

Question 17

Alex is trying to get to sleep at night. He manages to fall asleep, however every time he is about to enter REM sleep he is woken by possums in his roof. This occurs for a few days until finally he contacts a "possum catcher". Once all of the possums have been removed from Alex's property, he is no longer woken during the night. On the first "possum free" night, Alex is likely to experience

- A. Atonia.
- B. Microsleeps.
- C. REM Rebound.
- D. REM Behaviour disorder.

Question 18

Sonia is a 15 year old girl. She regularly has arguments with her mother about what time she should go to bed at night. Sonia's mother feels tired at around 10:00 p.m., however Sonia doesn't feel tired until 11:30 p.m. The reason Sonia feels tired after her mother is due to

- A. Melatonin being released earlier in Sonia and therefore her body clock is shifted forward by one to two hours.
- B. Melatonin being released later in Sonia and therefore her body clock is shifted earlier by one to two hours.
- C. Melatonin being released earlier in Sonia and therefore her body clock is shifted backwards by one to two hours.
- D. Melatonin being released later in Sonia and therefore her body clock is shifted later by one to two hours.

Question 19

The main function of the corpus callosum is to

- A. connect the two halves of the brain.
- B. form a protective layer that surrounds the brain.
- C. enable the transfer of information between the two hemispheres.
- D. form a "bridge" between the two hemispheres to enable the left hand side of the brain to know what the right hand side of the brain is doing and vice versa.

Question 20

Which of the following is **not** true regarding the frontal lobe?

- A. The left frontal lobe controls voluntary movement of the right hand side of the body.
- B. The left frontal lobe is responsible for the comprehension of speech.
- C. The left frontal lobe is responsible for the production of articulate speech.
- D. The frontal lobe is responsible for complex mental functions such as decision making and planning.

Question 21

Justin has suffered a motorcycle accident. Since the accident, Justin struggles to understand what other people are saying to him. He has also lost the feeling of sensation in his right foot. Which two parts of Justin's brain are most likely damaged?

- A. Right temporal lobe and right parietal lobe.
- B. Left temporal lobe and left parietal lobe.
- C. Right frontal lobe and right parietal lobe.
- D. Left parietal lobe and corpus callosum.

Question 22

Which of the following is **not** true regarding the organisation of the primary motor cortex?

- A. Body parts that are more dextrous have a greater representation on the primary motor cortex.
- B. Body parts that are located lower on the body are located higher on the primary motor cortex.
- C. Larger body parts have a greater representation on the primary motor cortex than smaller body parts.
- D. The left primary motor cortex controls voluntary movement on the right side of the body.

Question 23

Research into hemispheric specialisation suggests that although both the left and right hemispheres are involved in nearly all functions, one hemisphere usually dominates the other. Identify in the table below the correct functions for both the left and right hemispheres.

	Left Hemisphere	Right Hemisphere
A.	Emotions, Analysis	Creativity, Fantasy
B.	Creativity, Mathematics	Speech production, Reasoning
C.	Speech production, Fantasy	Creativity, Appreciation of Art
D.	Mathematics, Speech production	Creativity, Appreciation of Art

Question 24

Spatial neglect occurs when a person has damaged their _____, while Wernicke's aphasia occurs when a person has damaged their _____.

- A. right parietal lobe, left temporal lobe
- B. left parietal lobe, left temporal lobe
- C. right parietal lobe, left frontal lobe
- D. left parietal lobe, left frontal lobe

Question 25

Matthew is a split brain patient. He is asked to look at a screen and report what he saw in each of the following situations.

1. A picture of a bird is flashed to his left eye only.
2. A picture of a house is flashed to his right visual field.

Which on the following is true regarding the above situations?

- A. In situation 1, the picture of the bird would register in his right visual field only. In situation 2, Matthew would be able to say that he had seen a picture of a house.
- B. In situation 1, the picture of the bird would register in both his left and right visual fields. In situation 2, Matthew would be able to say that he had seen a picture of a house.
- C. In situation 1, the picture of the bird would register in his left visual field only. In situation 2, Matthew would be able to say that he had seen a picture of a house.
- D. In situation 1, the picture of the bird would register in his right visual field only. In situation 2, Matthew would be unable to say that he had seen a picture of a house.

Question 26

Change blindness is considered to be a perceptual anomaly. Which of the following is the best description of change blindness?

- A. Change blindness refers to the difficulty observers have in noticing large changes to visual scenes.
- B. Change blindness refers to the difficulty observers have in noticing small changes to visual scenes.
- C. Change blindness refers to the ability observers have in noticing large changes to visual scenes.
- D. Change blindness refers to the ability observers have in noticing small changes to visual scenes.

Question 27

Jonathon can taste strawberries every time he hears the word "carpet" being spoken by his mother. Jonathon's condition is often referred to as a "cross-wiring of the senses". The correct technical term for Jonathon's condition is

- A. Sense blindness.
- B. Motion after-effect.
- C. Sensation Anomaly.
- D. Synesthesia.

Question 28

Anthea has been involved in a serious car accident in which she sustained damage to her head. It is suggested that Anthea undergoes a CT scan to check for brain injury. Which of the following is **not** true regarding a CT scan?

- A. A CT scan shows the structure of the brain.
- B. A CT scan uses a contrast that is radioactive.
- C. A CT scan does not show brain function.
- D. A CT scan can only be performed by a radiologist.

Question 29

A PET scan can be used to determine brain function. When a person undergoes a particular task, the PET uses colour coding to indicate the different levels of brain activity. Which of the following would be indicated on a PET scan of a person who is comprehending speech?

- A. Wernicke's area would be highlighted in violet and blue.
- B. Broca's area would be highlighted in violet and blue.
- C. Wernicke's area would be highlighted in red and yellow.
- D. Broca's area would be highlighted in red and yellow.

Questions 30 & 31 refer to the following information.

Peter is sitting at his desk late one night studying for a psychology exam. All of a sudden he hears a loud bang on the window, triggering his fight-flight response.

Question 30

Which of the following would **not** be a possible physiological change that occurs to Peter as a result of the fight-flight response being activated?

- A. Dilation of pupils.
- B. Increased sweating.
- C. Increased salivation.
- D. Bronchioles dilate.

Question 31

Once Peter realises that the loud bang was a bird flying into the window. His physiological processes return to normal levels. What is the name of the nervous system enabling Peter's physiological responses to return to normal?

- A. Parasympathetic Nervous System.
- B. Sympathetic Nervous System.
- C. Autonomic Nervous System.
- D. Somatic Nervous System.

Question 32

Which of the following is **not** true regarding short term memory?

- A. Short Term Memory is often referred to as "working memory".
- B. Short Term Memory has a capacity of 7 ± 2 bits of information.
- C. Elaborative rehearsal maintains information in Short Term Memory for an unlimited period of time.
- D. Chunking increases the capacity, but not the duration of Short Term Memory.

Question 33

Samantha and Mary are both teachers at a new school. Samantha has decided to use maintenance rehearsal to learn the names of the students in her class, while Mary has decided to use elaborative rehearsal. Which of the following is likely to be true?

- A. Samantha will associate each student's name with a geographical location in the classroom.
- B. Mary will repeat her students names over and over until they finally "sink in".
- C. Mary will be more likely to remember the students in her class as the names of the students are more likely to be linked to information already stored in her Long Term Memory.
- D. Samantha and Mary are both likely to remember their students names for only a short period of time as the names of the students will be lost from Sensory Memory.

Question 34

Krystal is a brilliant pianist. She has been playing the piano since the age of three and now at the age of 16 has the ability to play in front of large audiences. Krystal knows that a piano has 88 keys, she can remember the first time she bought a piano and she knows how to play a piece called "a handful of keys". Which of the following is true regarding Krystal's memory regarding the piano?

- A. Krystal knowing that the piano has 88 keys is an example of procedural memory.
- B. Krystal knowing how to play "a handful of keys" is an example of declarative memory.
- C. Krystal remembering the first time she bought a piano is an example of episodic memory.
- D. None of the above.

Questions 35-37 refer to the following information.

Sarah has been asked by her mother to buy a number of items from the shop. Unfortunately Sarah does not have a pen to write down the items and therefore attempts to remember them. Her mother tells Sarah the items, but Sarah only appears to remember the names of the items at the beginning and at the end of the list.

Question 35

Sarah's ability to remember the items at the beginning and end of the list is due to

- A. items in the middle of the list have been forgotten as they are only stored in sensory memory.
- B. items at the end of the list are stored in long term memory, while items at the beginning of the list are stored in short term memory.
- C. items in the middle of the list are not stored in either short term memory or long term memory and are therefore forgotten.
- D. items at the end of the list are stored in sensory memory, while items at the beginning of the list are stored in short term memory.

Question 36

Sarah's ability to remember items at the end of the list is referred to as the

- A. Serial Position Effect.
- B. Primacy Effect.
- C. Recency Effect.
- D. Order Effect.

Question 37

If Sarah was to wait 45 seconds at the conclusion of her mother calling out the list before attempting to commit the shopping items to memory, what would be the likely effect?

- A. Recall will be superior for words at the beginning of the list.
- B. Recall will be superior for words at the end of the list.
- C. Recall will be superior for words in the middle of the list.
- D. There will be no difference in the recall of words.

Question 38

Samuel performs better on the multiple choice section of his psychology exam than the short answer section. This is because

- A. relearning is a more sensitive measure of retention than recall.
- B. recall is a more sensitive measure of retention than recognition.
- C. relearning and recognition are both more sensitive measures of retention than recall.
- D. recognition is a more sensitive measure of retention than recall.

Question 39

Joseph is looking through the newspaper and sees a picture of a famous actor. Joseph knows a lot of information about the actor such as movies he has appeared in, the name of the actor's wife, the fact that the actor knows how to fly a plane and even the first letter of the actor's name. But unfortunately Joseph is unable to name the actor. Joseph's inability to name the actor at this given point in time is referred to as

- A. Tip-of-the-tongue phenomenon.
- B. Retrieval failure phenomenon.
- C. Motivated forgetting.
- D. Decay theory.

Question 40

Jamie has been summoned for jury duty. He is listening to a case regarding a man who stole a lady's purse. The lawyer asks the following question "What colour balaclava was the man wearing when he stole the lady's purse?" This question assumes that the man was wearing a balaclava. This is an example of a/n _____ question.

- A. misleading
- B. leading
- C. inappropriate
- D. manipulative

Question 41

Sharon has thoroughly enjoyed learning psychology. She has been happy in all classes this year and finds psychology to be her favourite subject. On the day of her psychology exam, Sharon spends the morning with friends who she knows will also make her happy. Sharon is attempting to use _____ cues.

- A. State dependent
- B. Context dependent
- C. Both State dependent and Context dependent
- D. Recall

Questions 42-44 refer to the following information

Professor Scott is conducting a study to determine whether the use of mnemonic devices improves memory for first year Psychology students at Winthorpe University. To do this, Professor Scott randomly selects 100 first year students. He divides them into two groups. Group 1 does not use a mnemonic device while attempting to remember a list of 20 words. Group 2 does use a mnemonic device while attempting to remember a list of 20 words.

Question 42

The 100 students chosen for the study is referred to as the

- A. Population.
- B. Control group.
- C. Sample.
- D. Experimental group.

Question 43

Group 2 was asked to write a funny story and place the words to be remembered throughout the story. The mnemonic device used for this group was

- A. Peg word method.
- B. Narrative Chaining.
- C. Method of Loci.
- D. Rhyme.

Question 44

Professor Scott found that students who used a mnemonic device remembered more words than students who did not. The most likely reason for these findings is

- A. mnemonic devices are a form of maintenance rehearsal as they enable repetition of information.
- B. mnemonic devices are a form of relearning which is the most sensitive measure of retention.
- C. mnemonic devices are a form of repetition, therefore improving recall.
- D. mnemonic devices are a form of elaborative rehearsal as the information to be remembered is linked to information already stored in long term memory.

Question 45

Motivated forgetting is a theory of forgetting that has two main types:

- A. Repression and Regression.
- B. Repression and Suppression.
- C. Suppression and Regression.
- D. Depression and Regression.

End of Section A

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SECTION B – Short Answer Questions

Question 1

Paul is learning to SCUBA dive for the first time. Provide two reasons as to why SCUBA diving for Paul is considered a controlled process.

(2 marks)

Question 2

Define the term "daydream". In your answer, suggest times when daydreams are most likely to occur, and the brainwave patterns typical of a person who is daydreaming.

(3 marks)

Question 3

Explain how an Electroencephalograph can be used to determine whether or not someone is asleep.

(3 marks)

Question 4

Professor Shrink wants to conduct an experiment to determine whether adequate sleep reduces irritability. He would like to eliminate as many participant related variables as possible.

- a. Name the experimental design that Professor Shrink should use.

(1 mark)

- b. What is the unwanted effect that could occur by using this experimental design?

(1 mark)

- c. How could Professor Shrink eliminate the effect identified in (b)?

(2 marks)

Question 5

Samantha is having trouble sleeping and therefore visits a sleep clinic. She is attached to an Electromyograph. Explain how this device can be used to determine the stage of sleep a person is experiencing, in particular whether Samantha is experiencing REM sleep.

(3 marks)

Question 6

Provide an explanation for the survival theory of sleep. In your answer, state the main limitation for this theory of sleep.

(2 marks)

Question 7

Explain the location and main function of

- a. The primary motor cortex.

(2 marks)

- b. The primary somatosensory cortex.

(2 marks)

Question 8

Why is Electrode Stimulation considered to be an invasive brain research method?

(1 mark)

Question 9

Chelsea is undertaking a six week computer course. At the end of the six weeks, Chelsea will be given an examination. Explain the terms encoding, storage and retrieval in relation to Chelsea learning the computer course and being examined at a later date.

(3 marks)

Question 10

Mr Smith is a Psychology teacher. His class is conducting an activity on the serial position effect. Mr Smith divides his class into two groups (group 1 and group 2). During the activity, Mr Smith reads out a list of words to his class and asks the students to write down as many words that they can remember. Group 1 is asked to write down the words immediately, however Group 2 is asked to write down the words after a 45 second time delay. At the conclusion of the activity, Mr Smith asks his students to graph the results. Explain how the duration of short term memory can influence the shape of the two graphs.

(3 marks)

Question 11

Define Long-term potentiation.

(1 mark)

Question 12

Mary has been sitting in her psychology class for approximately 5 minutes. She feels thirsty, so she raises her hand and asks to get a drink. On the way to the drinking taps, Mary falls down the stairs and bumps her head, knocking her unconscious. When Mary regains consciousness, she cannot remember anything that had been said in her psychology class. Name the theory explaining Mary's inability to remember and provide an explanation.

(3 marks)

Question 13

Provide one reason as to why memory decline may occur in an elderly person who is healthy.

(1 mark)

Question 14

There are three different measures of retention: recall, relearning and recognition. Some measures of retention are said to be more sensitive than others. What does the term "sensitive" refer to with regards to measures of retention?

(1 mark)

Question 15

James has recently changed address. However when he tells his friends his new phone number, he often confuses it with the phone number of his old address. What type of interference is James experiencing?

(1 mark)

End of Section B

Suggested Answers

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SECTION A – Multiple Choice Answers

1. A	2. B	3. D	4. A	5. D	6. B	7. B	8. C	9. B
10. A	11. C	12. D	13. C	14. A	15. B	16. B	17. C	18. D
19. C	20. B	21. B	22. C	23. D	24. A	25. B	26. A	27. D
28. B	29. C	30. C	31. A	32. C	33. C	34. C	35. C	36. C
37. A	38. D	39. A	40. B	41. A	42. C	43. B	44. D	45. B

SECTION B – Short Answer (Answers)

Question 1

SCUBA diving is considered a controlled process for Paul because it requires a high level of concentration **(1 mark)**.

Paul is unable to divide his attention on other activities at the same time as SCUBA diving **(1 mark)**.

Or

SCUBA diving requires selective attention **(1 mark)**.

Question 2

Daydreaming occurs when we shift our attention from external stimuli to internal thoughts, feelings and imagined scenarios **(1 mark)**.

Daydreams are most likely to occur when we are stationary, when alone, doing boring or routine activities etc **(1 mark)**.

The brainwaves experienced during a daydream are alpha brainwaves **(1 mark)**.

Question 3

An EEG detects, amplifies and records the electrical activity of the brain in the form of brainwaves **(1 mark)**.

Brainwaves that are high in frequency and low in amplitude (Beta brain waves) indicate that a person is awake and aware of their surroundings and therefore experiencing normal waking consciousness **(1 mark)**.

Brainwaves that are low in frequency and high in amplitude (Delta brain waves) indicate that a person is asleep (NREM stage 3 or NREM stage 4) **(1 mark)**.

Question 4

a. Repeated Measures Design **(1 mark)**.

b. Either of: Order effect, Practise Effect, Boredom Effect or Carry-over Effect **(1 mark)**.

c. Professor Shrink could use counterbalancing **(1 mark)**. This would involve dividing the sample into two groups. Group 1 would experience the control condition first, followed by the experimental condition. Group 2 would experience the experimental condition first, followed by the control condition **(1 mark)**.

Question 5

An electromyograph detects, amplifies and records electrical activity of the muscles (1 mark). Less electrical activity indicates a deeper stage of sleep. Therefore, when Samantha is asleep, she will experience greater electrical activity in stage 1 sleep when compared to stage 4 sleep (1 mark). During REM sleep, the EMG would show little or no electrical activity as Samantha would most likely be experiencing atonia (1 mark).

Question 6

The survival theory of sleep proposes that sleep enhances survival by protecting the organism through keeping it inactive and therefore less likely to be attacked by predators (1 mark). However, a main limitation of this theory is that it does not explain that while asleep, the organism is not aware of its surroundings and therefore unable to respond to danger (1 mark).

Question 7

- a. The primary motor cortex is located towards the rear of the frontal lobes (1 mark). Its main function is in the control of voluntary bodily movements through the control of the skeletal muscles (1 mark).
- b. The primary somatosensory cortex is located towards the front of the parietal lobes (1 mark). Its main function is to receive and process sensory information from the skin and body (1 mark).

Question 8

Electrode Stimulation is considered an invasive method as the patients' cerebral cortex is exposed. The brain is then stimulated by an electrode while the patient is conscious. (1 mark).

Question 9

Encoding - Firstly, Chelsea will be required to encode (convert) the information that she is learning into a useable form that can be stored in memory (1 mark).

Storage – Once the information has been encoded into a useable form, Chelsea will be required to store the information in memory until it is needed (at the time of her examination) (1 mark).

Retrieval – Chelsea will be required to locate and access the information regarding the computer course that is stored in memory so that it can be used when completing her examination (1 mark).

Question 10

The graph showing the results for Group 1 would indicate that the recall for words would be superior at the end and beginning of the list (1 mark). The graph showing the results for Group 2 would indicate that the recall for words would be superior at the beginning of the list (1 mark). This is because STM has a duration of 30 seconds and therefore Group 2 would no longer have the items from the list in their STM and therefore these items (those at the end of the list) would be forgotten (1 mark).

Question 11

Long-term potentiation refers to the long lasting strengthening of synaptic connections of neurons resulting in the enhanced functioning of the neurons **(1 mark)**.

Question 12

Consolidation theory **(1 mark)** proposes that whenever something new is learned, neuronal changes take place. These changes take up to 30 minutes and during this time the memory of what is learned is consolidated **(1 mark)**. If the memory formation is disrupted during this time, then the neuronal changes will be disrupted and therefore the information may be forgotten. Mary has disrupted the consolidation (as she hit her head) and therefore has forgotten what has happened in her psychology class **(1 mark)**.

Question 13

Either one of the following for **(1 mark)**

- Lack of motivation
- Loss of confidence
- Inability to access information from LTM
- Slowing of the central nervous system

Question 14

The term sensitive refers to the ability (of the measure of retention) to access the amount of information that has been stored in memory. Recognition is said to be more sensitive than recall as it enables more information to be accessed from memory **(1 mark)**.

Question 15

Proactive Interference **(1 mark)**.

SECTION C – Extended Response Answers

The peg-word method consists of memorising a jingle that has "pegs" on which you "hang" the items to be remembered **(1 mark)**.

Suzanne could construct the following jingle **(1 mark)**

One is a bun: bun – vegemite

Two is a shoe: shoe – horse

Three is a tree: tree – carrot

Four is a door: door – green

Five is a hive: hive – mosquito

Suzanne would need to visualise the items to be remembered and the "peg" they are "hung" on. The "peg" would then act as a retrieval cue for the item she is trying to remember.

(1 mark).

Narrative chaining involves linking unrelated items or words into a story. The more bizarre the story, the easier the items are to remember **(1 mark)**.

For example, Suzanne could construct the following story

The man has run out of black shoe polish so he decided to use **vegemite**, before hopping on his **horse** which was eating a **carrot**. He rode the horse over the lovely **green** meadow but unfortunately was bitten by a **mosquito**. **(1 mark)**.

The story would act as a retrieval cue, enabling Suzanne to remember the five words **(1 mark)**.

The method of loci uses a well learned sequence of locations which act as retrieval cues for the information to be remembered **(1 mark)**.

Suzanne could visualise her house and mentally associate each of the items to be remembered with a room of her house.

For example, she may associate vegemite with her front door as she remembers the time her daughter smeared vegemite on the doorhandle, she associates a horse with her daughter's bedroom as this is the animal her daughter has always wanted as a pet, she associates carrot with the kitchen, green with the walls in the laundry and mosquito with the bathroom as the window is always left open, letting in mosquitoes. **(1 mark)**.

Suzanne could then mentally walk through her house in order – front door, daughter's bedroom, kitchen, laundry and bathroom. Each room of the house will act as a retrieval cue, helping her to remember the five items to be remembered **(1 mark)**.

Relating to scenario and ensuring items are remembered in order **(1 mark)**.

End of Suggested Answers